

DATE: November 10, 1997

TO: Office of Water Programs Staff

FROM: E. H. Bartsch, P.E., Director
Office of Water Programs

SUBJECT: Water & Sewage - Procedure - Plan Processing - P.E. Seal

Delete: WM 775

In accordance with the *Code of Virginia*, at §54.1-410.B, we are required to ensure that submittals for our approval comply with the rules and regulations adopted by the Board for Architects, Professional Engineers, Land Surveyors, and Landscape Architects (APELSLA). With respect to the programs carried out by the Office of Water Programs, the chief concern deals with the requirement for documents to bear the seal of the design professional who takes the responsibility for those documents. The Office of Water Programs does not set those requirements, but merely carries out requirements set by the APELSLA Board and by the Department of Professional and Occupational Regulation, which serves as staff to the Board.

Under normal circumstances, all plans and specifications submitted for our review must bear the seal of an appropriately licensed professional engineer. The APELSLA Board has recently issued revised regulations, which call for all work prepared by a licensed professional to carry that person's seal (18 VAC 10-20-760 B.4), including work that is not specifically required by the Code to bear a seal. The following are the requirements for the engineer's seal.

1. Plans: The cover sheet must bear a "original" seal, signature, and date. All other sheets are required to have the seal and signature, but these are not required to be an original. Plan sheets accompanying addenda or change orders must bear a seal and signature, but neither need be an original, unless the sheet is a cover sheet.
2. Specifications: The cover page must bear an "original" seal, signature, and date. No other pages are required to have a seal.
3. Addenda: An addendum must bear an "original seal", signature, and date, or the transmittal/cover letter must be signed by the licensed engineer (not the office secretary, etc.).

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4. Change Orders: No seal is required for change orders, but a signature is required. Change Orders submitted for review must have signature blocks signed by designated officials (normally, these will include representatives of the owner, the engineer, and the contractor).
5. Projects submitted by Local, State, or Federal Government agencies, or their political subdivisions:

The *Code of Virginia* (at §§54.1-401, -402, and -402.1) contains certain exemptions to the normal requirements that licensed professionals perform regulated work. Projects submitted to by local, state, or federal government, or their political subdivisions, may comply with Items 1-4 above by either:

- a. having a licensed P.E. prepare and seal the documents;

-or-

- b. having the government request, in writing, the P.E. exemption for the person in responsible charge, who would then sign the following statement on the cover of the documents:
 - i. For federal projects:

These documents were prepared in accordance with Section 54.1-401.5 of the *Code of Virginia* regarding the practice of professional engineering.

_____	_____
Name	Date

Title	

(This exemption was established as early as 1950, and is aimed at persons who practice engineering as a part of their job with the federal government. This exemption does not apply to those persons who are employees of the United States who perform engineering work for clients outside of the federal government.)

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- ii. For state or local projects:

These documents were prepared in accordance with Section 54.1-402.1 of the *Code of Virginia* regarding the practice of professional engineering.

<hr/> Name	<hr/> Date
<hr/> Title	

(This exemption was established in 1994, and applies only to government employees who were engaged in engineering, architecture, or land surveyor positions prior to March 8, 1992, and who remain employed in those positions. This exemption expires on June 30, 2010. The exemption does not apply to those persons who are employees of state or local government who perform engineering work for clients outside of their government position.)

For any project submitted to us by government agencies which does not meet either a or b above, we should include as one of our comments the following:

"In accordance with our understanding of the *Code of Virginia* regarding the practice of professional engineering, this submittal is required to bear the seal, signature, and date of a properly licensed professional."

6. In specific reference to the requirement for a professional engineer's seal, we will process the plans and specifications only if the cover sheets to all plans and specifications bear an "original" seal and signature, and dated. The remaining plan sheets need only have facsimiles of the seal and signature (a date is also required). Any plan sheets prepared by a licensed engineer, other than the engineer sealing the cover sheet, must bear facsimiles (as a minimum) of the seal and signature of that engineer.

According to DPOR and APELSLA, the seal consists of the "shell" (which can be created by a rubber stamp, an embossing machine, computer-generated seals or pre-printed seals with gummed backing) and the signature and date. An "original" seal consists of the shell plus an original signature and

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date. A facsimile seal consists of the shell (which may at this point be duplicated via any means) and a duplicated signature and date. The key is that, for an "original" seal to be properly authenticated, the signature and date must truly be original. The "shell" may be created via many different ways, some of which involve copying. For example, a computer-generated shell could be applied to the master blueprint of a cover sheet, and an engineer could apply an original signature and date to a print made from the master. This would meet the requirement for an "original" seal, signature, and date.

7. Technical Reports and other documents: The cover sheet of all preliminary engineering reports is to bear an "original" seal, signature, and date. P.E. seals are also to be required for items such as O&M Manuals, biosolids management plans, bacte sample siting reports, or other similar documents (exempted work), but only if they are prepared by, or under the supervision of, a licensed professional. There is no requirement for these exempted documents to be prepared by a licensed professional. APELSLA is requiring licensed professionals to indicate responsibility for work which is exempted.
8. There has been significant controversy about the role of land surveyors with respect to preparation of certain types of plans and specifications. The *Code of Virginia*, at §54.1-408, authorizes land surveyors to prepare plans and profiles for (among other things) sanitary sewer extensions and waterline extensions, but only for subdivisions, site plans, and development work. The *Code* then goes on to specifically prohibit land surveyors from engaging in the design of pressure hydraulic systems, and states that the allowed work must involve the use and application of standards prescribed by local and state authorities.

Based on guidance received from staff of the Office of the Attorney General, surveyors who were licensed under the old §54.17.1(3)(b) or who have passed the appropriate exam given by APESLA may lay out the routing of a waterline on plans, but may not select the size or materials for that waterline. This work is to be done by a licensed P.E. We will accept plans and specifications for waterlines prepared by a licensed surveyor, as long as they are accompanied by hydraulic calculations (covering size and material selection) prepared and stamped by a licensed P.E.

Attachments:

1. Letter dated April 30, 1987, to Mr. Melvin Corso, L.S., concerning waterline plans prepared by surveyors.
2. Memorandum dated June 29, 1984, from Cynthia V. Bailey, Assistant Attorney General, concerning waterline plans prepared by surveyors.

(continued)

April 30, 1987

Mr. Melvin Corso, L.S.
M. L. Corso and Associates
Suite 1008
7206 Hull Street Road
Richmond, Virginia 23235

Dear Mr. Corso:

This letter is to confirm our telephone conversation of April 30, 1987 relative to my interpretation of the licensure law for 3b surveyors and their authority to design waterline extensions. My interpretation is based upon the memorandums dated June 29, 1984 and October 3, 1984 to me from Cynthia V. Bailey, the then Assistant Attorney General, regarding House Bill 540.

A 3b surveyor may do the routing of waterline extensions; however, the sizing of the waterline is beyond the scope of authority granted to the 3b surveyor. The sizing of the waterline must be done by a licensed professional engineer or an employee of local government who meets the exemption specified in Section 54-37, Paragraph 7 of the Code of Virginia. In cases where the 3b surveyor includes waterline extensions in development plans, the 3b surveyor should include either a hydraulic analysis performed by a licensed professional engineer which supports the line size chosen and bears the stamp of the professional engineer or a copy of the hydraulic analysis performed by the local government with some type of certification, i.e., signature of the appropriate local government employee who was authorized to do the analysis and has the authority to represent the local government. In most cases, the county engineer, public works director, or similar official would be the appropriate person.

If the above specified information is submitted with the plans and specifications prepared by the 3b surveyor there should be no problem with the acceptance of the plans and specifications by the Division of Water Programs.

Sincerely,

w/EHB

Eric H. Bartsch, P.E., Director
Division of Water Programs

cc: S. K. Anderson, P.E.
bcc: A. R. Hammer, P.E.
R. B. Taylor, P.E.
T. B. Gray, P.E.
C. M. Sawyer, P.E.
Regional Directors

(ON LETTERHEAD)

MEMORANDUM

TO: ERIC H. BARTSCH, P.E., Director
Division of Water Programs
Department of Health

FROM: CYNTHIA V. BAILEY
Assistant Attorney General

DATE: June 29, 1984

RE: House Bill 540

In accordance with your request, I have reviewed House bill 540, Acts 1984, 437, which alters the definition of the practice of land surveying. House Bill 540 amends § 54-17.1 of the 1950 Code of Virginia, as amended (Code) to broaden the definition of land surveying. Specifically, new § 54-17.1(3)(b) provides in pertinent part that:

"a land surveyor may, for subdivisions, site plans and plans of development only, prepare plats, plans and profiles for roads, storm drainage, and water line extensions and may perform other engineering incidental to such work but excluding the design of pressure hydraulic, structural, mechanical and electrical systems."

You indicate that all water line extensions are pressure hydraulic systems and that for this reason the legislation appears to be contradictory. You further advise that a surveyor is not tested on knowledge of pressure hydraulic systems and has had no educational training in this area.

The authorization for a surveyor to be involved with water line extensions seems to contemplate that the land surveyor may, for the purposes of site plans and plans of development only prepare plats, plans, and profiles for water line extensions. Indeed, the second paragraph of § 54-17.1 of the Code (unchanged by H. B. 540) provides that "(N)othing contained in

Memorandum
Eric H. Bartsch, P.E.
June 29, 1984
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subsection (a) and (b) except as therein provided shall be construed to include engineering design and the preparation of plans and specifications for construction." Based on this language, it would appear to me that the surveyor may develop a site plan for a water line, e. g., locate in a particular development where a water line is to go and develop other siting information but the actual design and construction of the water line itself must be done by an engineer. One problem with this interpretation is the language, "other engineering incidental to such work." This legislation does not define "engineering incidental to such work," but it is my view that this term means engineering incidental to actual location of the water line with respect to other development features but that an engineer must develop plans for the construction of the line.

Please call me at 61780 if you have any questions.

6:36/200C32
cc: Richard C. Kast, Assistant Attorney General